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dance Notes on Codes and Abbreviations" appearing at the be-
ginning of each regular issue of the PCT Gazette.

(54) Title: **POLYMERISATION INITIATOR SYSTEM**

(57) Abstract: The present invention relates to a polymerisation initiator system, in particular a system for aqueous emulsion or solution polymerisation with a polymerisation initiator system comprising an azo-compound as an initiator. The present invention further relates to a method for preparing a polymer, in particular an emulsion or solution polymerisation method, which method comprises the addition of a specific polymerisation initiator system.

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INTERNATIONAL SEARCH REPORT

International Application No.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08F4/04 C07D233/24 B65D77/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08F C07D B65D C08K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 902 596 A (MCVAY MALCOLM SCOTT C) 2 September 1975 (1975-09-02)	10, 11
Y	column 2, line 46 - line 60 column 3, line 28 - line 42 column 4, line 1 - line 8 column 5, line 14 - line 30 claims 1-16	1-9, 15, 16
Y	EP 0 668 098 A (OTSUKA KAGAKU KK) 23 August 1995 (1995-08-23) cited in the application the whole document	1-9, 15, 16
A	EP 0 262 381 A (WAKO PURE CHEM IND LTD) 6 April 1988 (1988-04-06) page 2, line 24 - line 53 example 1	1-9, 15, 16

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

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International Application No.
EP2004 004130

C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 230 445 A (MAY & BAKER LTD) 24 October 1990 (1990-10-24) page 2, line 7 - page 3, line 24 page 5, paragraph 3 page 6, paragraph 3	1-16
E	EP 1 469 012 A (TEMSA INTERNAT INC) 20 October 2004 (2004-10-20) example 1	1-16

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/004130**Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

International Application No. PCT/EP2004 /004130

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-9 15,16

the subject matter of claims 1-9 and 15-16 which differs from D1 insofar as it relates to water soluble containers

2. claims: 10-14 (in part)

the subject matter of claims 10-14 excluding the subject matter of group 1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/004130

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3902596	A	02-09-1975	NONE
EP 0668098	A	23-08-1995	JP
		JP	3510663 B2
		AU	7233133 A
		AU	667175 B2
		CA	7585494 A
		CN	2118444 A1
		EP	1119641 A ,C
		KR	0668098 A1
		US	169340 B1
			5650498 A
EP 0262381	A	06-04-1988	JP
		JP	2598641 B2
		AT	53146866 A
		DE	59638 T
		EP	3766922 D1
		ES	0262381 A1
		GR	2038633 T3
		US	3001278 T3
			4990600 A
GB 2230445	A	24-10-1990	AR
		AT	244638 A1
		AT	146148 T
		AT	145187 T
		AT	146432 T
		AT	150724 T
		AT	285955 T
		AT	177399 T
		AT	177395 T
		AT	179139 T
		AU	642851 B2
		AU	3767689 A
		AU	642853 B2
		AU	3837589 A
		AU	642855 B2
		AU	3839689 A
		AU	643423 B2
		AU	3840389 A
		AU	4498893 A
		BR	8907491 A
		BR	8907492 A
		BR	8907493 A
		BR	8907494 A
		CA	1334285 C
		CA	1334832 C
		CA	1334833 C
		CA	1337638 C
		CN	1039227 A ,C
		CN	1040550 A ,C
		CN	1040551 A ,C
		CN	1040552 A ,C
		CZ	8903625 A3
		CZ	8903626 A3
		CZ	8903627 A3
		CZ	8903628 A3
		DE	68927449 D1
		DE	68927449 T2
		DE	68927536 D1
			30-11-1993
			15-12-1996
			15-11-1996
			15-01-1997
			15-04-1997
			15-01-2005
			15-03-1999
			15-03-1999
			15-05-1999
			04-11-1993
			12-01-1990
			04-11-1993
			12-01-1990
			04-11-1993
			12-01-1990
			18-11-1993
			12-01-1990
			02-12-1993
			21-05-1991
			21-05-1991
			21-05-1991
			21-05-1991
			07-02-1995
			21-03-1995
			21-03-1995
			28-11-1995
			31-01-1990
			21-03-1990
			21-03-1990
			21-03-1990
			16-03-1994
			16-03-1994
			16-03-1994
			16-03-1994
			19-12-1996
			15-05-1997
			23-01-1997

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/004130

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2230445	A	DE 68927536 T2	05-06-1997
		DE 68927563 D1	30-01-1997
		DE 68927563 T2	12-06-1997
		DE 68927901 D1	30-04-1997
		DE 68927901 T2	14-08-1997
		DE 68928949 D1	15-04-1999
		DE 68928950 D1	15-04-1999
		DE 68928976 D1	27-05-1999
		DE 68928976 T2	02-12-1999
		DE 68929528 D1	03-02-2005
		DK 297290 A	14-02-1991
		DK 297390 A	14-02-1991
EP 1469012	A	EP 1469012 A1	20-10-2004
		WO 2004092224 A2	28-10-2004